

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (Currently amended) A system for enabling components to transfer
2 data between each other, the system comprising:
3 a plurality of components including a first component having a data object
4 that implements a universal data transfer interface; and
5 a second component capable of receiving the data object and invoking the
6 universal data transfer interface to cause a data transfer session object (DTSO) to
7 be sent to the second component ~~at least one of the plurality of components when~~
8 ~~the at least one of the plurality of components has data to transfer to another~~
9 ~~component from the plurality of components~~, wherein the second component ~~can~~
10 ~~be acts as~~ an intermediary component, which facilitates transferring of the DTSO
11 from the first component to a third component ~~to the at least one of the plurality of~~
12 ~~components~~;
13 wherein the DTSO is capable of being invoked by the third component ~~at~~
14 ~~least one of the plurality of components~~ to transfer data between the first
15 component and the third component ~~at least one of the plurality of components~~;
16 wherein the DTSO includes instructions to return data types supported by
17 the first component;
18 wherein the DTSO includes instructions that enable the first component to
19 receive asynchronous event notifications;

20 wherein the DTSO includes instructions to return device type and
21 operating status of the first component; and
22 wherein the DTSO includes instructions to enable the first component or
23 the ~~third component~~ at least one of the plurality of components to negotiate with
24 each other to select a transfer medium to use to transfer data based upon the type
25 of data.

1 2. (Cancelled)

1 3. (Currently amended) The system as set forth in claim 1 wherein the ~~at~~
2 ~~least one of the plurality of components~~ third component sends a second DTSO to
3 the first component to be used by the first component for receiving data
4 transmitted from the ~~at least one of the plurality of components~~ third component.

1 4. (Currently amended) The system as set forth in claim 1 wherein the ~~at~~
2 ~~least one of the plurality of components~~ third component receives the DTSO from
3 the first component to be used by the ~~at least one of the components~~ third
4 component for receiving data transmitted from the first component.

1 5. (Currently amended) The system as set forth in claim 1 wherein the
2 universal data transfer interface and the DTSO have source-specific object-
3 oriented mobile code that can be interpreted and performed by the first component
4 or the ~~at least one of the plurality of components~~ third component.

1 6. (Currently amended) The system as set forth in claim 1 wherein the
2 DTSO comprises instructions to enable the first component or the ~~at least one of~~
3 ~~the plurality of components~~ third component to negotiate with each other to

4 transfer data, to select a communications protocol configured to transfer data
5 between each other based upon a type of data to be transferred.

1 7. (Currently amended) The system as set forth in claim 1 wherein the
2 DTSO is configured to indicate completion responsive to expiration of a data
3 transfer lease by the first component or by the ~~at least one of the plurality of~~
4 ~~components~~third component, or responsive to the first component or to the ~~at least~~
5 ~~one of the plurality of components~~third component indicating that the data transfer
6 has completed or failed.

1 8. (Currently amended) A system for enabling components to transfer data
2 between each other, the system comprising:
3 a first component having a first data object that implements a first
4 universal data transfer interface;
5 a second component having a second data object that implements a second
6 universal data transfer interface; and
7 a third component capable of receiving the first data object and the second
8 data object, and invoking the first universal data transfer interface and the second
9 universal data transfer interface to use a data transfer session object (DTSO) to
10 transfer data between the first component and the second component when the
11 first component has data to transfer to the second component, wherein the third
12 component ~~can be acts as~~ an intermediary component, which facilitates
13 transferring of the DTSO from the first component to the ~~at least one of the~~
14 ~~plurality of components~~ second component;
15 wherein the DTSO includes instructions to return data types supported by
16 the first component;

17 wherein the DTSO includes instructions that enable the first component to
18 receive asynchronous event notifications;
19 wherein the DTSO includes instructions to return device type and
20 operating status of the first component; and
21 wherein the DTSO includes instructions to enable the first component or
22 ~~the at least one of the plurality of components to negotiate with the second~~
23 ~~component each other to select a transfer medium to use to transfer data based~~
24 upon the type of data.

1 9. (Previously presented) The system as set forth in claim 8 wherein the
2 third component sends the DTSO to the first component to be used by the first
3 component for receiving data transmitted from the second component.

1 10. (Previously presented) The system as set forth in claim 8 wherein the
2 third component sends the DTSO to the second component to be used by the
3 second component for receiving data transmitted from the first component.

1 11. (Currently amended) The system as set forth in claim 8 wherein the
2 DTSO is configured to indicate completion responsive to expiration of a data
3 transfer lease by the first component or the ~~at least one of the plurality of~~
4 ~~components~~second component, or responsive to the first component or the ~~at least~~
5 ~~one of the plurality of components~~second component indicating that the data
6 transfer has completed or failed.

1 12. (Currently amended) A method for enabling a plurality of
2 components to transfer data between each other, the method comprising:

invoking, with a second component having a data object that implements a
universal data transfer interface, ~~at the~~ universal data transfer interface of a first
component of a plurality of components to cause a data transfer session object
(DTSO) to be sent to ~~at least one of the plurality of components~~ the second
component, wherein the second component ~~can be acts as~~ an intermediary
component, which facilitates transferring of the DTSO from the first component
to ~~the at least one of the plurality of components~~ a third component; and
invoking the DTSO with the ~~at least one of the plurality of~~
~~components~~ third component to transfer data between the first component and the
~~at least one of the plurality of components~~ third component when the first
component has data to transfer to the ~~at least one of the plurality of~~
~~components~~ third component;

wherein the DTSO includes instructions to return data types supported by
the first component;

wherein the DTSO includes instructions that enable the first component to
receive asynchronous event notifications;

wherein the DTSO includes instructions to return device type and
operating status of the first component; and

wherein the DTSO includes instructions to enable the first component or
the ~~at least one of the plurality of components~~ third component to negotiate with
each other to select a transfer medium to use to transfer data based upon the type
of data.

13. (Cancelled)

14. (Currently amended) The method as set forth in claim 12 further
comprising sending a second DTSO to the first component to be used by the first

3 | component for receiving data transmitted from the ~~at least one of the plurality of~~
4 | ~~components~~third component.

1 | 15. (Currently amended) The method as set forth in claim 12 further
2 | comprising receiving the DTSO from the first component to be used by the ~~at~~
3 | ~~least one of the components~~third component for receiving data transmitted from
4 | the first component.

1 | 16. (Currently amended) The method as set forth in claim 12 wherein the
2 | universal data transfer interface and the DTSO have source-specific object-
3 | oriented mobile code that can be interpreted and performed by the first component
4 | ~~or the at least one of the plurality of components~~third component.

1 | 17. (Currently amended) The method as set forth in claim 12 wherein the
2 | DTSO comprises instructions to enable the first component or the ~~at least one of~~
3 | ~~the plurality of components~~third component to negotiate with each other to
4 | transfer data, to select a communications protocol configured to transfer data
5 | between each other based upon a type of data to be transferred.

1 | 18. (Currently amended) The method as set forth in claim 12 further
2 | comprising configuring the DTSO to indicate completion responsive to expiration
3 | of a data transfer lease by the first component or by the ~~at least one of the plurality~~
4 | ~~of components~~third component, or responsive to the first component or to the ~~at~~
5 | ~~least one of the plurality of components~~third component indicating that the data
6 | transfer has completed or failed.

1 | 19. (Currently amended) A method for enabling components to

transfer data between each other, the method comprising:

- invoking a first universal data transfer interface of a first data object belonging to a first component and a second universal data transfer interface of a second data object belonging to a second component when the first component has data to transfer to the second component, wherein the second component ~~can~~ acts as an intermediary component, which facilitates transferring of the DTSO from the first component to ~~the at least one of the plurality of components~~ a third component;
- obtaining a data transfer session object (DTSO) from one of the invoked first universal data transfer interface or the second universal data transfer interface; and
- using the DTSO to transfer data between the first component and the second component;
- wherein the DTSO includes instructions to return data types supported by the first component;
- wherein the DTSO includes instructions that enable the first component to receive asynchronous event notifications;
- wherein the DTSO includes instructions to return device type and operating status of the first component; and
- wherein the DTSO includes instructions to enable the first component or ~~the at least one of the plurality of components~~ third component to negotiate with each other to select a transfer medium to use to transfer data based upon the type of data.

20. (Previously presented) The method as set forth in claim 19 further comprising sending the DTSO to the first component to be used by the first component for receiving data transmitted from the second component.

1 21. (Previously presented) The method as set forth in claim 19 further
2 comprising sending the DTSO to the second component to be used by the second
3 component for receiving data transmitted from the first component.

1 22. (Currently amended) The method as set forth in claim 19 further
2 comprising configuring the DTSO to indicate completion responsive to expiration
3 of a data transfer lease by the first component or by the ~~at least one of the plurality~~
4 ~~of components~~third component, or responsive to the first component or to the at
5 ~~least one of the plurality of components~~third component indicating that the data
6 transfer has completed or failed.

1 23. (Currently amended) A computer readable medium having stored
2 thereon instructions for enabling components to transfer data between each other,
3 which when executed by one or more processors, causes the processors to
4 perform:
5 invoking, with a second component, a universal data transfer interface of a
6 data object belonging to a first component of a plurality of components to cause a
7 data transfer session object (DTSO) to be sent to ~~at least one of the plurality of~~
8 ~~components~~the second component when the first component has data to transfer
9 to ~~at least one of the plurality of components~~a third component, wherein the
10 second component ~~can be acts as~~ acts as an intermediary component, which facilitates
11 transferring of the DTSO from the first component to the ~~at least one of the~~
12 ~~plurality of components~~third component; and
13 invoking the DTSO with the at least one of the plurality of components to
14 transfer data between the first component and the ~~at least one of the plurality of~~
15 ~~components~~third component;

16 wherein the DTSO includes instructions to return data types supported by
17 the first component;
18 wherein the DTSO includes instructions that enable the first component to
19 receive asynchronous event notifications;
20 wherein the DTSO includes instructions to return device type and
21 operating status of the first component; and
22 wherein the DTSO includes instructions to enable the first component or
23 the at least one of the plurality of components third component to negotiate with
24 each other to select a transfer medium to use to transfer data based upon the type
25 of data.

1 24. (Cancelled)

1 25. (Currently amended) The medium as set forth in claim 23 further
2 comprising sending a second DTSO to the first component to be used by the first
3 component for receiving data transmitted from the ~~at least one of the plurality of~~
4 ~~components~~ third component.

1 26. (Currently amended) The medium as set forth in claim 23 further
2 comprising receiving the DTSO from the first component to be used by the ~~at~~
3 ~~least one of the components~~ third component for receiving data transmitted from
4 the first component.

1 27. (Currently amended) The medium as set forth in claim 23 wherein the
2 universal data transfer interface and the DTSO have source-specific object-
3 oriented mobile code that can be interpreted and performed by the first component
4 or the ~~at least one of the plurality of components~~ third component.

1 28. (Currently amended) The medium as set forth in claim 23 wherein the
2 DTSO comprises instructions to enable the first component or the ~~at least one of~~
3 ~~the plurality of components~~ third component to negotiate with each other to
4 transfer data, to select a communications protocol configured to transfer data
5 between each other based upon a type of data to be transferred.

1 29. (Currently amended) The medium as set forth in claim 23 further
2 comprising configuring the DTSO to indicate completion responsive to expiration
3 of a data transfer lease by the first component or by the ~~at least one of the plurality~~
4 ~~of components~~ third component, or responsive to the first component or to the ~~at~~
5 ~~least one of the plurality of components~~ third component indicating that the data
6 transfer has completed or failed.

1 30. (Currently amended) A computer readable medium having stored
2 thereon instructions for enabling components to transfer data between each other,
3 which when executed by one or more processors, causes the processors to
4 perform:

5 invoking a first universal data transfer interface of a first data object
6 belonging to a first component and a second universal data transfer interface of a
7 second data object belonging to a second component when the first component
8 has data to transfer to the second component, wherein the second component ~~can~~
9 beacts as an intermediary component, which facilitates transferring of the DTSO
10 from the first component to the ~~at least one of the plurality of components~~ a third
11 component;

12 obtaining a data transfer session object (DTSO) from one of the invoked
13 first universal data transfer interface or the second universal data transfer
14 interface; and

15 using the DTSO to transfer data between the first component and the
16 second component;
17 wherein the DTSO includes instructions to return data types supported by
18 the first component;
19 wherein the DTSO includes instructions that enable the first component to
20 receive asynchronous event notifications;
21 wherein the DTSO includes instructions to return device type and
22 operating status of the first component; and
23 wherein the DTSO includes instructions to enable the first component or
24 the at least one of the plurality of components third component to negotiate with
25 each other to select a transfer medium to use to transfer data based upon the type
26 of data.

1 31. (Previously presented) The medium as set forth in claim 30 further
2 comprising sending the DTSO to the first component to be used by the first
3 component for receiving data transmitted from the second component.

1 32. (Previously presented) The medium as set forth in claim 30 further
2 comprising sending the DTSO to the second component to be used by the second
3 component for receiving data transmitted from the first component.

1 33. (Currently amended) The medium as set forth in claim 30 further
2 comprising configuring the DTSO to indicate completion responsive to expiration
3 of a data transfer lease by the first component or by the at least one of the plurality
4 of components third component, or responsive to the first component or to the at
5 least one of the plurality of components third component indicating that the data
6 transfer has completed or failed.